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MAR 12 1965

CURRENT SERIAL RECORDS



Hotbed and Propagating Frame



THE HOTBED IN USE

This plastic-covered hotbed, which can also be used as a propagating frame, is inexpensive and easy to build.

The hotbed has two removable covers of 4-mil polyethylene plastic film, one on each side of the ridge. The covers may be rolled down from the ridge or up from the sides, which allows almost unlimited adjustment for ventilation. The covers are secured in the desired position with light ropes that pass over the plastic and down to the base at each end. Rubber tubing at one end of each rope provides tension. At

the end of the spring season, the covers can be rolled up and stored out of sunlight to prevent deterioration from ultraviolet radiation. Since the plastic film covering the ends of the structure is not removable, a long-lasting plastic is needed. Use of 4-mil vinyl or 3-mil type W polyester film is recommended.

The hotbed is made of wood. It has three arch frames of thin-wall electrical conduit. The frames may be easily bent to shape with a hand conduit bender. The wooden parts should be treated with a preservative after they have been cut. A thorough soaking in

Washington, D.C.

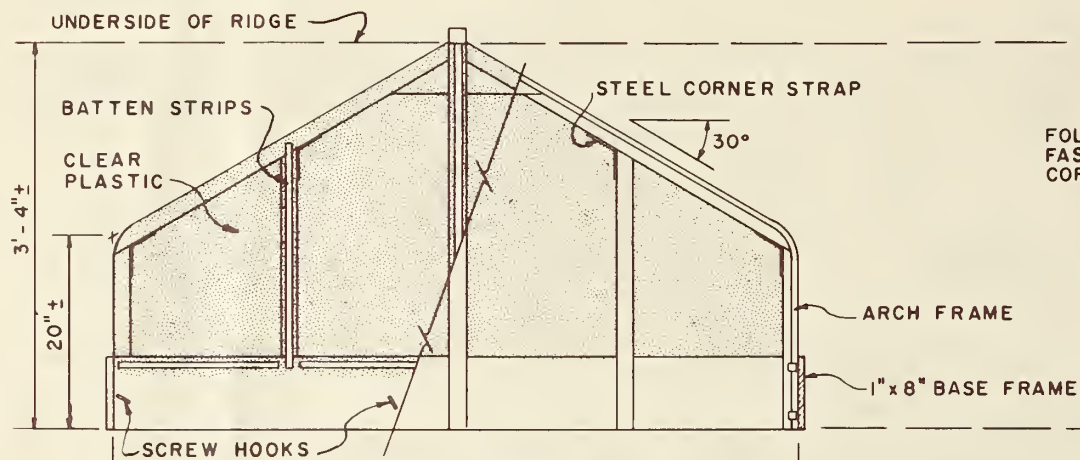
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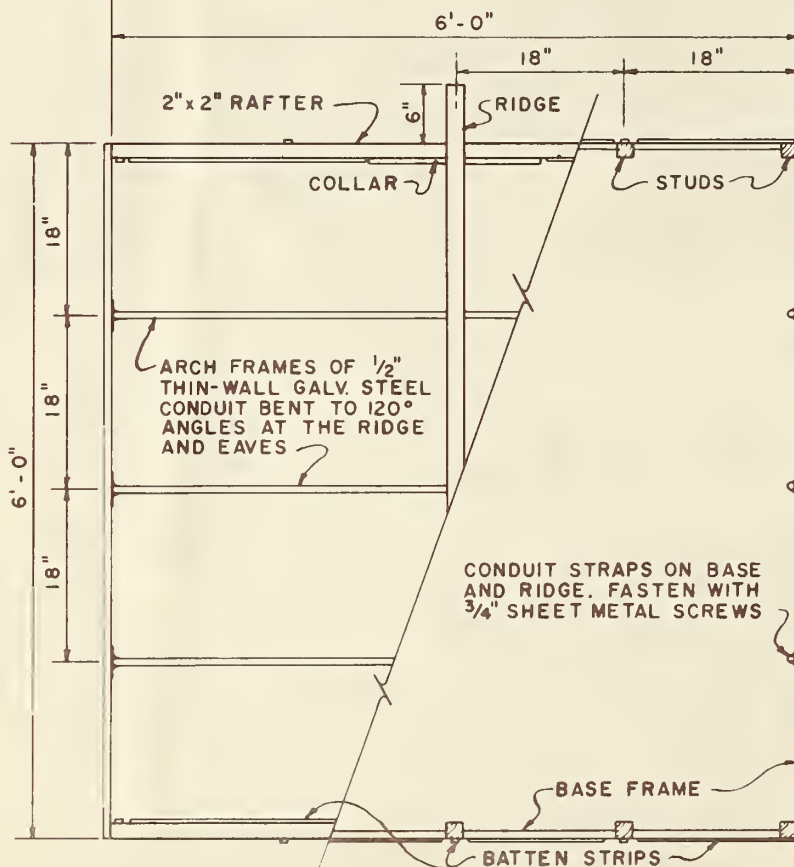
construction details ...



FOLD PLASTIC OVER AND FASTEN TO INNER SIDE OF CORNER STUDS NO RAFTERS

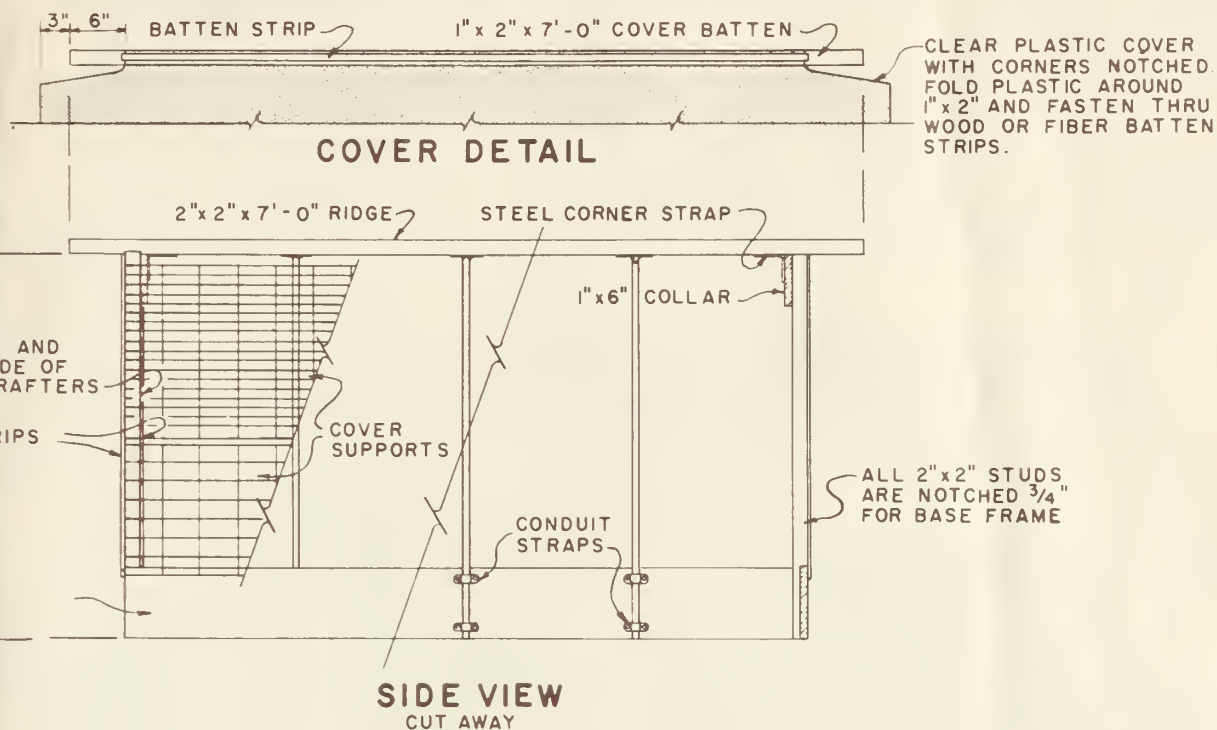
BATTENSTRIPS

END VIEW
CUT AWAY



TOP VIEW
CUT AWAY TO SHOW CONSTRUCTION

ITEM
BASE FRAME
COLLARS
RIDGE
RAFTERS
STUDS (CENTRAL)
(OTHER)
COVER BATTEN
ARCH FRAME
CONDUIT STRAP
CORNER STRAP
PLASTIC (END)
(COVER)
COVER SUPPLY
BATTEN STRIP
SCREW HOOK
FASTENINGS
SO HEATING



MATERIAL LIST

ITEM	QUANTITY	SIZE
FRAME	4 PCS	1" x 8" - 6'-0" LONG
COR BATTENS	1	1" x 6" - 2'-8" "
RAFTERS	1	2" x 2" - 7'-0" "
STRIPS (CENTER)	4	" - 3'-6" "
(OTHER)	2	" - 3'-4" "
COR BATTENS	4	" - 4'-0" "
AP. FRAMES	4	1" x 2" - 7'-0" "
CONDUIT STRAPS	3	1/2" DIA. 10'-0" "
COVER STRAPS	15	1/2" x 1" x 6" "
PLTIC (ENDS)	10	3'-0" x 6'-6" "
(COVERS)	2	6'-0" x 7'-6" "
COR SUPPORTS	2	3'-0" x 6'-0" "
"	2	1'-4" x 6'-0" "
BATTEN STRIPS		62'-0" "
SCREW HOOKS	8	
FASTENINGS	SEE NOTES	
HEATING CABLE	1	360 W. - 120'-0" "

ALL WOOD SHOULD BE TREATED WITH PRESERVATIVE AFTER CUTTING AND BEFORE ASSEMBLY.

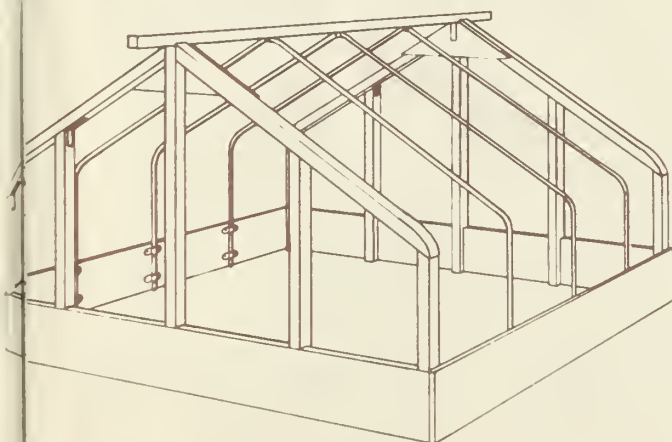
METAL PARTS AND FASTENINGS TO BE GALVANIZED OR OTHERWISE RESISTANT TO CORROSION.

METAL PARTS TO BE FASTENED WITH SCREWS.

WOOD PARTS MAY BE FASTENED WITH SCREWS OR WITH NAILS, CLINCHED WHERE POSSIBLE.

PLASTIC MAY BE FASTENED THRU THE BATTEN STRIPS WITH NAILS, SCREWS OR STAPLES.

SIDE AND TOP COVER SUPPORTS ARE 2 x 4 INCH WELDED WIRE MESH, HOOKED TOGETHER IN PAIRS AND HINGED LOOSELY TO THE RIDGE WITH STRONG CORD.



PERSPECTIVE VIEW
FRAMING ONLY

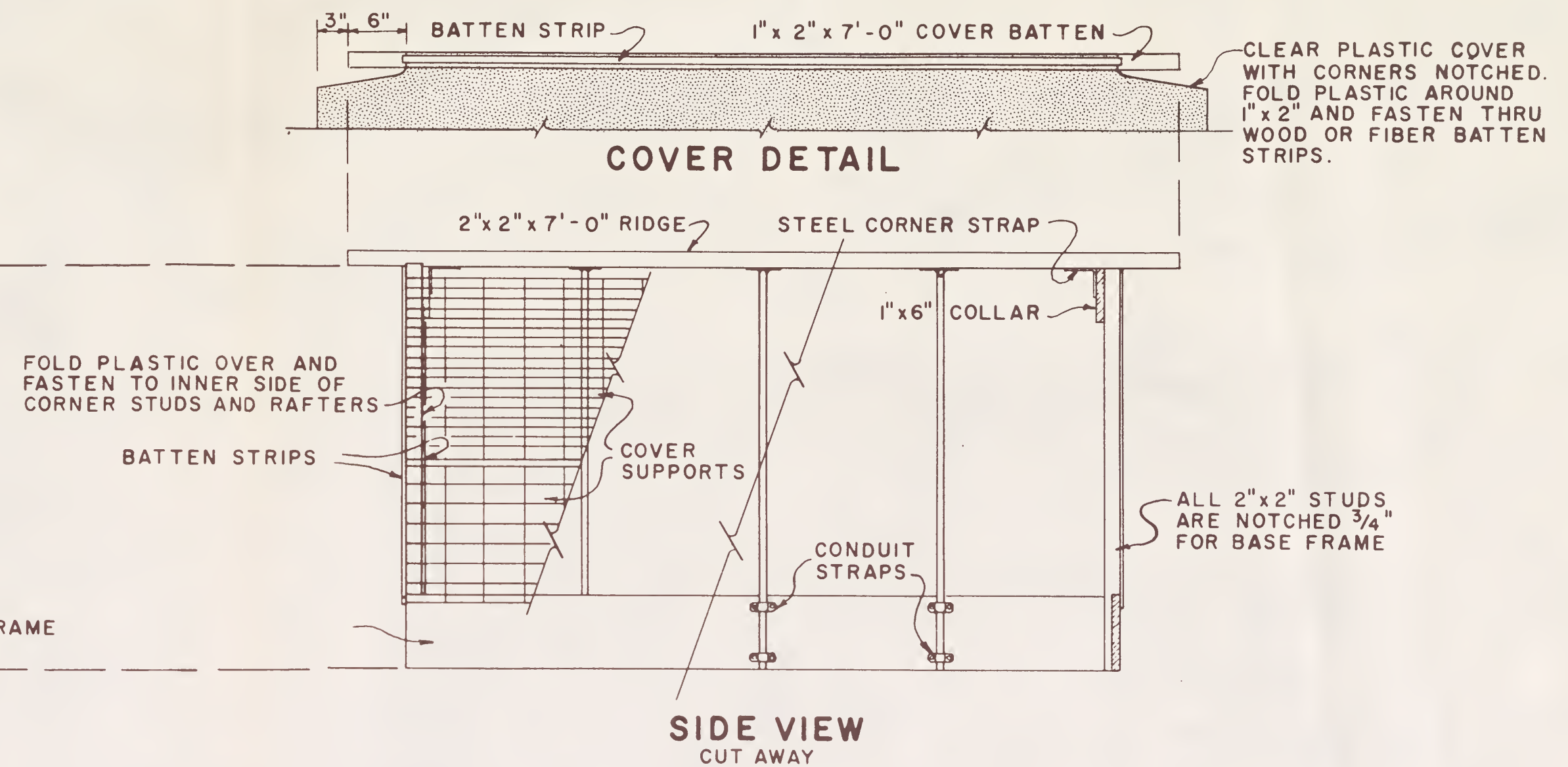
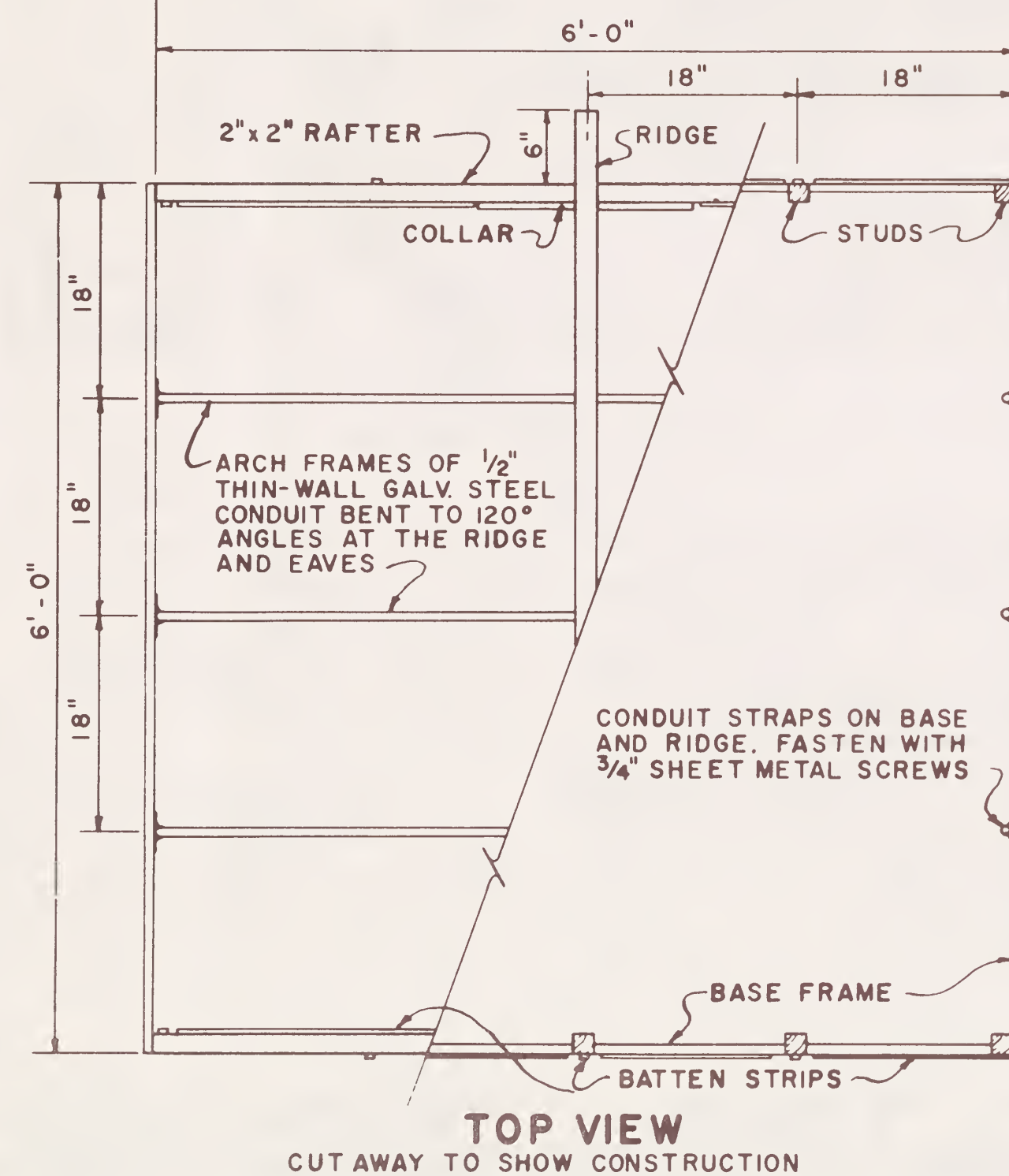
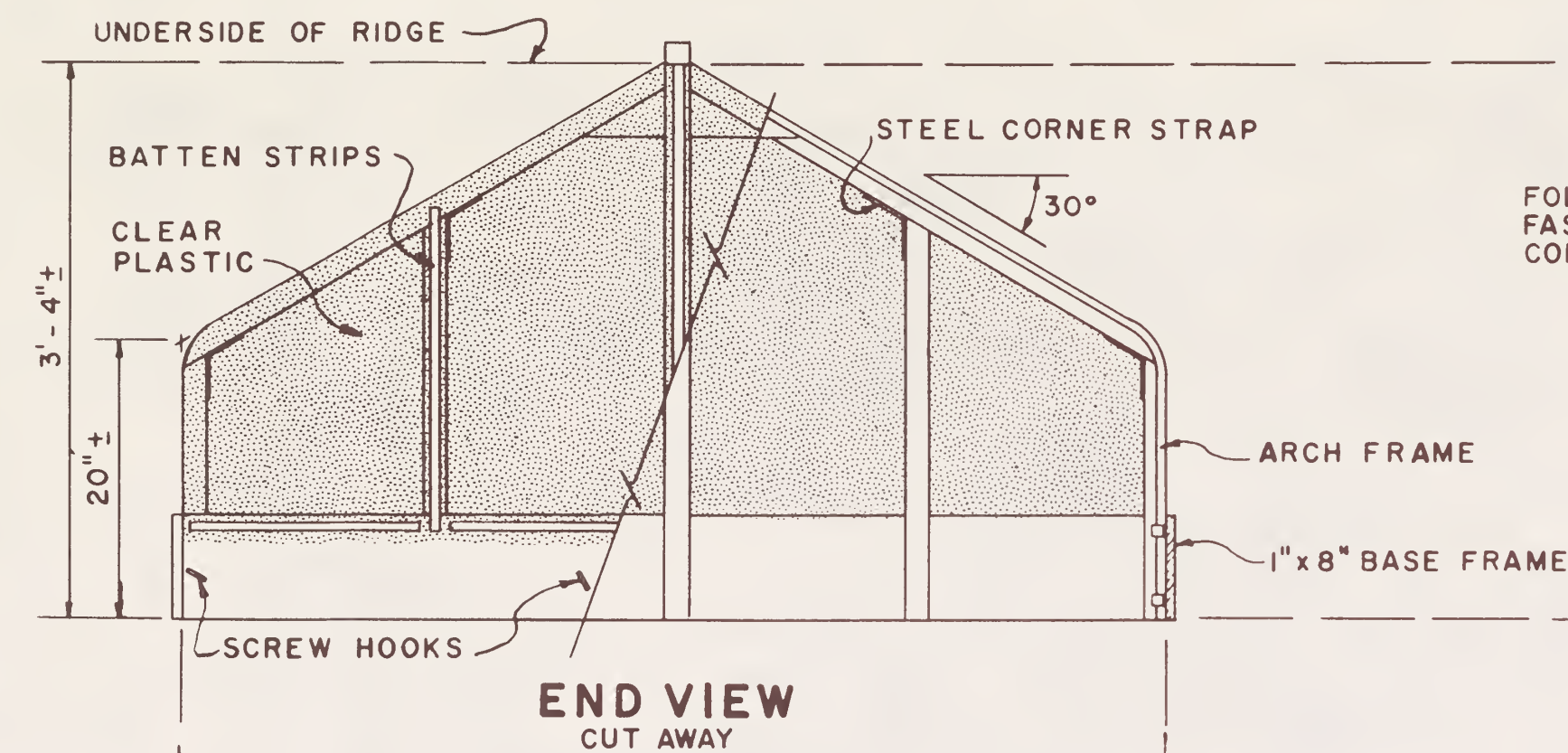
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

HOTBED & PROPAGATING FRAME

USDA '64 EX. 5971 SHEET 1 OF 1

construction details ...



MATERIAL LIST

ITEM	QUANTITY	SIZE
BASE FRAME	4 PCS	1" x 8" - 6'-0" LONG
COLLARS	1	1" x 6" - 2'-8" "
RAFTERS	1	2" x 2" - 7'-0" "
STUDS (CENTER)	4	" - 3'-6" "
" (OTHER)	2	" - 3'-4" "
COVER BATTENS	4	" - 4'-0" "
ARCH FRAMES	4	1" x 2" - 7'-0" "
CONDUIT STRAPS	15	1/2" DIA. 10'-0" "
CORNER STRAPS	10	1/8" x 1" x 6" "
PLASTIC (ENDS)	2	3'-0" x 6'-6" "
" (COVERS)	2	6'-0" x 7'-6" "
COVER SUPPORTS	2	3'-0" x 6'-0" "
"	2	1'-4" x 6'-0" "
BATTEN STRIPS		- 62'-0" "
SCREW HOOKS	8	
FASTENINGS	SEE NOTES	
SOIL HEATING CABLE	1	- 360 W. - 120'-0" "

ALL WOOD SHOULD BE TREATED WITH PRESERVATIVE AFTER CUTTING AND BEFORE ASSEMBLY.

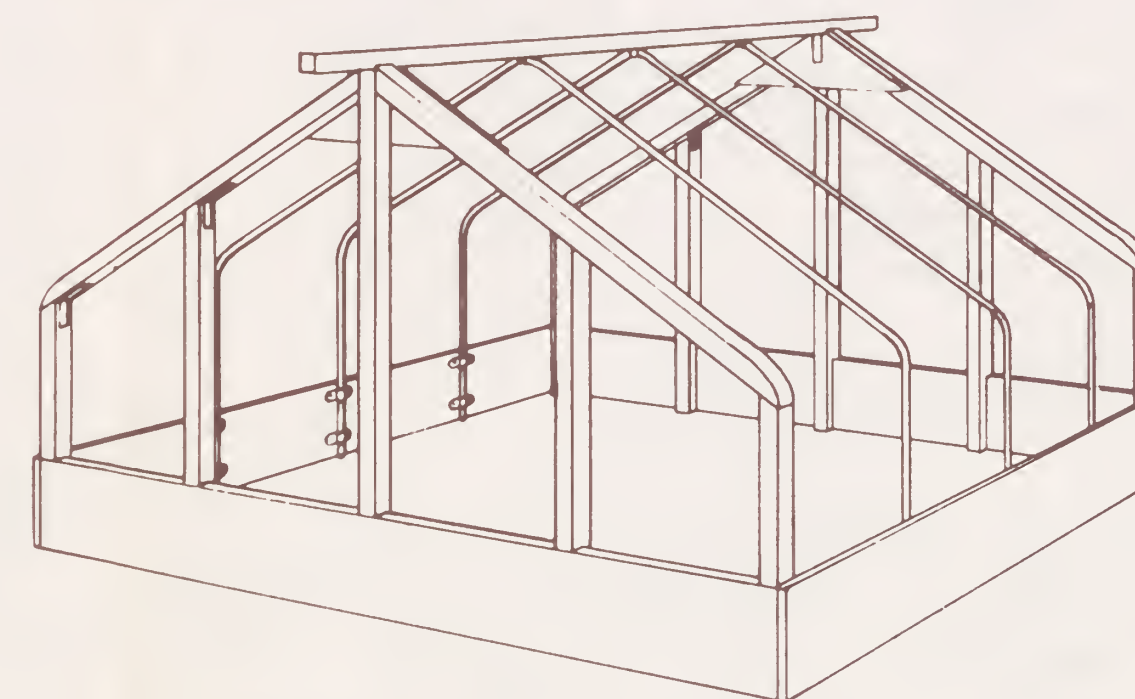
METAL PARTS AND FASTENINGS TO BE GALVANIZED OR OTHERWISE RESISTANT TO CORROSION.

METAL PARTS TO BE FASTENED WITH SCREWS.

WOOD PARTS MAY BE FASTENED WITH SCREWS OR WITH NAILS, CLINCHED WHERE POSSIBLE.

PLASTIC MAY BE FASTENED THRU THE BATTEN STRIPS WITH NAILS, SCREWS OR STAPLES.

SIDE AND TOP COVER SUPPORTS ARE 2 x 4 INCH WELDED WIRE MESH, HOOKED TOGETHER IN PAIRS AND HINGED LOOSELY TO THE RIDGE WITH STRONG CORD.



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

HOTBED & PROPAGATING FRAME

USDA '64 EX. 5971 SHEET 1 OF 1

a 5-percent solution of pentachlorophenol is suggested.

A soaking trough for treating the wood can be improvised by lining a small trench with polyethylene film. Weight the boards to be sure they are completely immersed in the liquid. Place thin spacers between the boards so the preservative will flow completely around each piece. Keep children and animals away from the soaking trough.

The hotbed should be located on well-drained soil.

In some locations a 3-inch layer of gravel under the prepared soil mixture or flats may be required. For supplementary heating a 360-watt electric soil-heating cable with a 70° thermostat is suggested. Lay the cable on a bed of sand or vermiculite; cover the cable with about 2 inches of sand. If the seed or cuttings are to be started in a prepared soilbed, rather than in pots or flats, protect the cable by placing one-half-inch mesh hardware cloth about 1 inch above it.



THE PROPAGATING FRAME

When the hotbed is used as a propagating frame for rooting cuttings, cheesecloth is fastened with clothespins to the welded wire frame that had supported the plastic film. Two mist sprayers are fastened to a 2 x 2 board 8 feet long, which can be mounted quickly and easily on the inside diagonally across the frame about 1 foot above the cuttings or on the outside above the ridge. The location of the sprayers to keep leaf surfaces of the cuttings moist depends on the weather.

If it is dry and windy, mount the sprayers on the inside. If humid and calm, mount the sprayers on the ridge. Operate the mist sprayer system during most of the daylight hours for about 30 days, then remove it. Keep the frame covered with cheesecloth. If the weather becomes windy and dry, it would be desirable to moisten the cheesecloth several times a day for an additional 2 weeks, by which time the cuttings will have developed roots.

A large-scale working drawing may be obtained through your county agent or from the Extension agricultural engineer at most State agricultural colleges. There is usually a small charge.

ORDER PLAN NO. 5971—HOTBED AND PROPAGATING FRAME

If the large-scale drawing is not available in your State, write to the U.S. Department of Agriculture, Agricultural Engineering Research Division, Plant Industry Station, Beltsville, Md. The U.S. Department of Agriculture does not distribute drawings but will direct you to a State that does distribute them.

Developed by:

Agricultural Engineering Research Division and Crops Research Division
AGRICULTURAL RESEARCH SERVICE

